



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,284	07/27/2006	Dieter Funk	021500-142	1559

21839 7590 02/03/2010  
BUCHANAN, INGERSOLL & ROONEY PC  
POST OFFICE BOX 1404  
ALEXANDRIA, VA 22313-1404

EXAMINER
----------

SZEWCZYK, CYNTHIA

ART UNIT	PAPER NUMBER
----------	--------------

1791

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

02/03/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com  
offserv@bipc.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/551,284	<b>Applicant(s)</b> FUNK ET AL.	
	<b>Examiner</b> CYNTHIA SZEWCZYK	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 8-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 15-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over YOSHIZAWA et al. (EP 0393759) in view of VANASCHEN et al. (US 4,738,704).

YOSHIZAWA teaches a method of heating glass sheets for laminated glass. YOSHIZAWA teaches that the glass sheets may be asymmetrical (p. 2, lines 13-17). YOSHIZAWA teaches that the glass sheets are preheated and press-bent (p. 2, lines 19) and finally cooled in a Lehr (p. 3, line 46). YOSHIZAWA discloses that the temperature of the glass sheets is equal after the preheating (p. 2, lines 30-33). It would have been obvious to one of ordinary skill in the art that after the glass sheets are finished and stored in a room of uniform ambient temperature, the glass sheets would be at the same temperature. YOSHIZAWA is silent to keeping the glass sheets at the same temperature immediately after pressing.

VANASCHEN teaches a method for bending laminated glass sheets. VANASCHEN discloses that it is imperative that glass sheets be at the same temperature after pressing because the smallest difference in cooling conditions between the two sheets will lead to deformations which make that laminated glass sheets unusable (col. 1, lines 58-62). Therefore, it would have been obvious to one of ordinary skill in the art to adapt the apparatus of YOSHIZAWA to control the heating of the glass sheets to keep the temperature of the glass sheets equal after pressing.

Regarding claim 3, YOSHIZAWA discloses that the temperature of the glass sheets at the end of the preheating is used as the control parameter (p. 4, lines 10-15).

3. Claims 2, 4, and 15- 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over YOSHIZAWA et al. (EP 0393759) in view of VANASCHEN et al. (US 4,738,704) as applied to claims 1 and 3 above, and further in view of INOUE et al. (US 2004/0079112 A1).

YOSHIZAWA as modified by VANASCHEN teaches a method of heating glass sheets for laminated glass. Modified YOSHIZAWA discloses that the temperature of the glass sheets at the end of the preheating is used as the control parameter (p. 4, lines 10-15). Modified YOSHIZAWA is silent as to detecting the temperature after pressing.

INOUE teaches a method of bending a glass sheet. INOUE discloses that an objective of the invention is to provide a glass sheet for automobile windows (para. 0002) without a wrinkle or optical distortion (para. 0008). INOUE discloses that this is accomplished by controlling the bending temperature and bending time period (para. 0009). Modified YOSHIZAWA discloses that the glass is intended to be used as automobile windows as well (p. 2, lines 3-5) and would therefore be designed to produce glass without a wrinkle or optical distortion as well. Therefore, it would have been obvious that the bending temperature and bending time period would have been controlled in modified YOSHIZAWA as well. It would have been obvious to one of ordinary skill in the art that controlling bending temperature and bending time period

would require measuring the temperature of the glass throughout the bending process, which would include the starting and final bending temperatures.

Regarding claim 4, figure 1a of INOUE shows the relation between glass bending time at different viscosities. Figure 1a shows that a higher viscosity requires a longer bending time, therefore, a glass at a higher temperature would require a longer bending time.

Regarding claim 15, see the discussion of claim 2.

Regarding claim 16, since VANASCHEN stresses the importance of having the glass sheets at the same temperature after press-bending (col. 1, lines 58-62), it is implied that a temperature detector would be present at the exit of the press-bending station in order to check if the glass sheets are at the same temperature.

Regarding claim 17, see the discussion of claim 2.

4. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over YOSHIZAWA et al. (EP 0393759) in view of VANASCHEN et al. (US 4,738,704) as applied to claims 1 and 3 above, and further in view of HERRINGTON et al. (US 4,952,227).

YOSHIZAWA as modified by VANASCHEN teaches a method of heating glass sheets for laminated glass. Modified YOSHIZAWA is silent as to the use of an intermediate cooling air.

HERRINGTON teaches a method of bending glass sheets wherein the apparatus is controlled to adjust operating parameters based on properties of the glass sheet

Art Unit: 1791

running through similar to the process of modified YOSHIZAWA. HERRINGTON teaches that it is necessary to provide cooling air to the preheating area to prevent the glass from over heating (col. 7, lines 3-18). It would have been obvious to one of ordinary skill to provide cooling air to the preheater of modified YOSHIZAWA because modified YOSHIZAWA discloses that it is necessary to control the temperature of the glass so that it does not overheat to the extent that deformation control would be lost (col. 5, lines 46-51).

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over YOSHIZAWA et al. (EP 0393759) in view of VANASCHEN et al. (US 4,738,704) and HERRINGTON et al. (US 4,952,227) as applied to claims 1, 3, 5, and 6 above, and further in view of BAMFORD et al. (US 4,043,782).

YOSHIZAWA as modified by VANASCHEN and HERRINGTON teaches a method of heating glass sheets for laminated glass wherein air cooling is used as an intermediate cooling to avoid overheating of the glass. Modified YOSHIZAWA is silent as to the blowing pressure of the air.

BAMFORD teaches a method of bending thin glass sheets for automobile windows. BAMFORD discloses that the glass undergoes tempering with air blowing under low pressure (col. 7, lines 35-40). BAMFORD discloses that the glass undergoes a first tempering at high air pressure and a second tempering at a lower air pressure of about 1 to 3 psi (col. 9, lines 1-4) or about 69 to 206 mbar. It would have been obvious

to one of ordinary skill in the art to set the air blowers of modified YOSHIZAWA to a blowing pressure below this range because it would avoid tempering the glass too early.

### ***Response to Arguments***

6. Applicant's arguments filed October 29, 2009 have been fully considered but they are not persuasive. Applicant argues on page 4 that VANASCHEN does not teach processing asymmetrical sheets, however VANASCHEN is relied upon to teach important factors for processing pairs of sheets simultaneously whereas YOSHIZAWA teaches that the glass sheets may be asymmetrical (p. 2 lines 13-17). Furthermore, YOSHIZAWA stresses the importance of maintaining the same temperature in the glass sheets during the pre-heating.

7. Additionally, it would have been obvious to one of ordinary skill in the art that after the glass sheets are finished and stored in a room of uniform ambient temperature, the glass sheets would be at the same temperature. The language of the claim does not require that the glass sheets are the same temperature immediately after bending.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

Art Unit: 1791

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CYNTHIA SZEWCZYK whose telephone number is (571)270-5130. The examiner can normally be reached on Monday through Thursday 7:30 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven P. Griffin/



Application/Control Number: 10/551,284  
Art Unit: 1791

Page 8

Supervisory Patent Examiner, Art  
Unit 1791

CS